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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

NGUYEN, CHAU M

ART UNIT PAPER NUMBER

2633

DATE MAILED: 12/18/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,978

Applicant(s)

HAN ET AL.

Examiner

Chau M Nguyen

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 objected to because of the following informalities:

The "differential" as appeared in lines 2 and 12 of claim 1, and in lines 2 and 4 of claim 2 is not correct.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (hereinafter "Ota") (U.S. Pat. No. 5,430,766) in further view of Thorp (U.S. Pat. No. 5,257,285).

As claims 1, 3 and 4 Ota (fig. 8) discloses an burst mode optical digital data receiver comprising:

a differential amplifying means (A_1) for detecting a difference between a digital data input signal and a reference signal to thereby generate an output signal; (col. 2, lines 33-37);

a reference signal generating means (peak detector) (col. 2, lines 37-40) and (870) (col. 9, lines 62-66), including an amplifying means (A_2) and a storing means (C_{PD}), for

Art Unit: 2633

detecting a peak value of the output signal (col. 3, line 38) and comparing the output signal with the reference signal through a amplifying means to thereby generate the reference signal corresponding to the peak value of the output signal (col. 2, lines 37-40), and for storing a peak value of the reference signal lines and providing the reference signal to the differential pre-amplifying means and the amplifying means through the storing means (col. 3, lines 45-64).

Ota differs from the claimed invention, in that Ota fails to show an amplifying means is a multistage amplifying. However, Thorp (fig. 4) provides a multistage amplifying means, (A1 and A2), including two differential amplifiers (col. 2, lines 50-55). Therefore, at the time of the invention was made, it would have been obvious to person of ordinary skill in the art to use multistage amplifying means as taught by Thorp to the circuitry of Ota. One having ordinary skill in the art would have been motivated to do this to restored the received signal strength and provide a good gain (col. 3, lines 3-5).

As claim 2, Ota discloses a current source (I_{comp}) for compensating an offset of the differential amplifying means (col. 5, lines 50-55 and col. 9, lines 53-56).

Reference Cited

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ota et al. (U.S. Pat. No. 5,025,456) is cited to show a burst mode digital data receiver.

Nagahori (U.S. Pat. No. 5,539,779) is cited to show an automatic offset control circuit for digital receiver.

Kaminishi et al. (U.S. Pat. No. 5,777,507) is cited to show a transceiver got a digital signal of an arbitrary pattern.

Nagahori (U.S. Pat. No. 5,838,731) is cited to show an burst-mode digital receiver.

Asano et al. (U.S. Pat. No. 5,875,049) is cited to show an optical receiving circuit.

Ota (U.S. Pat. No. 5,875,050) is cited to show a burst mode digital optical receiver.

Akimoto et al. (U.S. Pat. No. 5,818,620) is cited to show a burst optical signal receiver.

Kikuchi (U.S. Pat. No. 6,151,150) is cited to show a method and apparatus for level decision and optical receiver.

Yanagisawa (U.S. Pat. No. 6,191,879) is cited to show an offset control for burst-mode optical receiver.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau M. Nguyen whose telephone number is 703-305-8965. The examiner can normally be reached on Mon-Fri from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4726. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Application/Control Number: 09/825,978

Page 5

Art Unit: 2633

C.M.N.

Dec. 2, 2003



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